

WHAT IS CLAIMED IS:

1. A radar apparatus, said apparatus comprising:
 a dielectric resonator;
 a high-frequency oscillator connected to the
dielectric resonator for generating a high frequency;
 a base on which said dielectric resonator and
high-frequency oscillator are mounted; and
 a cover for covering said dielectric
resonator and high-frequency oscillator with a space
therebetween,

 wherein the distance between said high-
frequency oscillator and cover is a quarter or over of
the effective wave length of said high-frequency
oscillator.

2. The radar apparatus according to claim 1,
wherein said cover comprises projections extending
towards said dielectric resonator, and the distance
between the said high-frequency oscillator and
projections is a quarter or over of the effective wave
length of said high-frequency oscillator.

3. The radar apparatus according to claim 2,
wherein the distance between said base and cover is
half or over of the effective wave length of said high-
frequency oscillator.

4. The radar apparatus according to claim 3,
wherein the height of said projections is a quarter or
over of the effective wave length of said high-
frequency oscillator.

5. The radar apparatus according to claim 1, wherein a wave absorber which is better at absorbing wave than said cover is provided, and the distance between said high-frequency oscillator and wave absorber is a quarter or over of the effective wave length of said high-frequency oscillator.

6. A radar apparatus, said apparatus comprising:
a dielectric resonator;
a high-frequency oscillator connected to the dielectric resonator;

a base on which the dielectric resonator and high-frequency oscillator are mounted;

a cover bonded to the base for covering the dielectric resonator and high-frequency oscillator, in which the distance between the surface of the cover facing the dielectric resonator and the surface of the base facing the dielectric resonator is half or below of the effective wave length of the oscillator frequency, the cover having periodic projections facing the dielectric resonator which are a quarter of effective wave length of the oscillator frequency,

wherein the nearest distance between the surface of the dielectric resonator facing the cover and the surface of the cover facing the dielectric resonator is a quarter or over of the effective wave length of the oscillator frequency.

7. The radar apparatus according to claim 6, wherein said periodic projections are not present on at

least portions of said cover facing said dielectric resonator.

8. The radar apparatus according to claim 6, wherein a wave absorber is provided on at least a portion of said cover facing said dielectric resonator.

9. The radar apparatus according to claim 6, wherein a resonance frequency of cavity shape formed on a portion of said cover facing said dielectric resonator is way from the frequency of said oscillator by at least 2%.

10. The radar apparatus according to claim 6, the apparatus having a wave absorber that faces the dielectric resonator, wherein the nearest distance between the surface of said dielectric resonator facing the cover and the surface of the wave absorber facing the dielectric resonator is a quarter or over of the frequency of the oscillator.

11. A radar apparatus, comprising:

an MMIC including an oscillator, an amplifier and a mixer;

a circuit board on which the MMIC is mounted and connected;

an antenna board on which an antenna is mounted;

a base on which the circuit board and antenna board are mounted and a coaxial cable or waveguide are held which passes through the base to connect the circuit board and antenna board; and

a cover which is bonded to the base to cover the MMIC and circuit board, and is provided with projections facing the circuit board,

wherein at least any of the pitch, size, and shape of the projections formed on a place of the cover unit that faces the coaxial cable or waveguide differs from that of the projections formed on other place of the cover unit than the foregoing one.

12. The radar apparatus according claim 11, wherein a wave absorber is formed on the cover instead of said projections, and the absorptivity of the wave absorber existing on a place facing said coaxial cable or wave guide differs from that of a wave absorber existing on other place than the foregoing one.